

Rec'd PCT/US 04 FEB 2005

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
19 February 2004 (19.02.2004)

PCT

(10) International Publication Number  
**WO 2004/015066 A3**

(51) International Patent Classification<sup>7</sup>: C07H 21/02, 21/04, C12N 15/00, 15/09, 15/63, 15/70, 15/74, 5/00, 5/02, G01N 33/53, C12Q 1/68

(21) International Application Number:  
PCT/US2003/024359

(22) International Filing Date: 4 August 2003 (04.08.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/402,115 7 August 2002 (07.08.2002) US

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(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, L.C., LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CR, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:  
26 August 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

A3

(54) Title: SPERM-SPECIFIC CATION CHANNEL, CATSPER-4, AND USES THEREFOR

(57) **Abstract:** Nucleic acid and protein sequences relating to a cation channel which is sperm-specific (CatSper4) are disclosed. The CatSper protein is shown to be specifically expressed in sperm. Nucleic acids, vectors, transformed cells, transgenic animals, polypeptides, and antibodies relating to the CatSper4 gene and protein are disclosed. Also provided are methods of in vitro fertilization and contraception, methods of identifying modulators of CatSper4 activity, methods of genotyping subjects with respect to CatSper4, and methods of diagnosing and treating CatSper4-mediated disorders, including infertility. Related business methods are also disclosed.

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